



ANNUAL REPORT



on the

PUBLIC HEALTH AND
SANITARY CONDITION

of the

Rural Sanitary District
of Penrith

For the Year 1945.

F. W. GAVIN,

M.D., CH.B. (Edin.), D.P.H.,

MEDICAL OFFICER OF HEALTH.

Penrith :

REED'S LTD., Printers, &c., 46 King Street.

1946.



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MANSION HOUSE,
PENRITH,

1st August, 1946.

*To the Chairman and Members of the
Penrith Rural District Council.*

Mr. Chairman, Miss Dickenson and Members.

I have pleasure in presenting my tenth Annual Report which is on the health of the District for the year 1945.

In accordance with the instructions of the Ministry of Health contained in Circular 28/46 dated 11th February, 1946, the report is again curtailed.

The Vital Statistics for the year are favourable, the birth rate at 17.5 is the same as the average for the Rural Districts of Cumberland and above the figure for England and Wales (16.1).

The death rate at 11.07 is below the Cumberland County average at 12.7 and about the same as that for England and Wales (11.4).

The Infantile Mortality Rate at 35.71 is well below that for England and Wales (46) and for the Cumberland Rural Districts (43).

One infantile death was due to Whooping Cough which is always a dangerous disease for young children, and there were 34 notified cases during the year.

Measles was epidemic during the first part of the year, and altogether 233 notifications were received—with fortunately no deaths.

No cases of Diphtheria were recorded in 1945, and in this connection the campaign against this disease was continued actively.

It was estimated that some 94% of school children and 58% of pre-school children had completed a course of immunising injections.

Among the chief causes of death, Heart Disease with 33 deaths again heads the list, with Intracranial Vascular Lesions, which includes Cerebral Hæmorrhage, second with 20 deaths.

There were no deaths from maternal causes, and the total number of deaths from Cancer was lower at 11 (18 in 1944).

WATER :—Particulars of the water undertakings are furnished in this report.

In conclusion, I wish to express my thanks for the courtesy and help extended to me by the Chairman and Members of the Council, and to the Clerk to the Council and Sanitary Surveyor for their co-operation and assistance.

I have the honour to be,

Mr. Chairman, Miss Dickenson and Members,

Your obedient Servant,

F. W. GAVIN,

Medical Officer of Health.

STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

Area of the District (in acres)	.....	.....	.....	.....	181,531
Number of Inhabited Houses	.....	.....	.....	.....	3,220
Rateable Value	.....	.....	.....	.....	£50,807
Sum represented by a Penny Rate	.....	.....	.....	£211	7s. 1d.
Registrar General's estimate of the population	.....	.....	.....	.....	11,200
Live Births—	Male.		Female.	Total.	
Legitimate	..... 108	.....	..... 74	.....	182
Illegitimate	..... 7	.....	..... 7	.....	14
				.....	196
				
Birth Rate per 1,000 of population	.....	.....	.....	.....	17.50
Birth Rate for England and Wales	.....	.....	.....	.....	16.10
Still Births—	Male.		Female.	Total.	
Legitimate	..... 1	.....	..... 1	.....	2
Illegitimate	..... 2	.....	..... Nil	.....	2
Rate per 1,000 (total births, live and still)	.....	.....	.....	.....	20.00
Deaths—	Male.		Female.	Total.	
	67	.....	57	.....	124
Death Rate per 1,000 of population	.....	.....	.....	.....	11.07
Death Rate for England and Wales	.....	.....	.....	.....	11.4
Deaths from Puerperal Causes	.....	.....	.....	.....	Nil
Maternal Mortality Rate	.....	.....	.....	.....	Nil
Death Rate of Infants under one year :—					
All Infants per 1,000 live births	.....	.....	.....	.....	35.71
Legitimate Infants per 1,000 live births	.....	.....	.....	.....	20.40
Illegitimate Infants per 1,000 live births	.....	.....	.....	.....	15.30
Infantile Death Rate for England and Wales	.....	.....	.....	.....	46
Deaths from Cancer (all ages)	.....	.....	.....	.....	11
Deaths from Measles (all ages)	.....	.....	.....	.....	Nil
Deaths from Whooping Cough (all ages)	.....	.....	.....	.....	1
Deaths from Diarrhoea (under two years of age)	.....	.....	.....	.....	1

1945 VITAL STATISTICS.

	Birth Rate.	Crude Death Rate.	Infantile Mortality Rate.
Administrative County of Cum- berland	17.4	12.7	48
Urban Districts of Cumberland (including Boroughs of Work- ington and Whitehaven)	17.2	13.8	56
Rural Districts of Cumberland	17.5	12.0	43
Rural District of Penrith	17.50	11.07	35.71
England and Wales	16.10	11.40	46

SOCIAL CONDITIONS OF THE AREA.

The area of the district is 181,531 acres. The lime works at Flusco, Blencowe, Red Hills, the alabaster works at Little Salkeld, the brick works at Culgaith, and some quarries, are the only local industries, but agricultural work, however, remains the chief source of employment in the district.

There is no form of employment carried on which has a detrimental effect on the health of the workpeople.

INFANTILE MORTALITY, 1945.

Net Deaths from Stated Causes at ages under 1 year.

Causes of Death.	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	1-3 months	3-6 months	6-9 months	9-12 mths.	Total under 1 year
Premature Birth	1	-	-	-	1	-	-	-	-	1
Lobar Pneumonia	-	-	-	-	-	-	-	-	-	-
Broncho Pneumonia	1	-	-	1	2	-	-	-	-	2
Whooping Cough	-	-	-	-	-	-	-	1	-	1
Capillary Bronchitis	-	-	-	-	-	-	-	-	-	-
Spina Bifida	-	-	-	-	-	-	-	-	-	-
Cerebral Hæmorrhage	-	1	-	-	1	-	-	-	-	1
Gastro-Enteritis	-	-	-	1	1	-	-	-	-	1
Convulsions	1	-	-	-	1	-	-	-	-	1
TOTALS	3	1	-	2	6	-	-	1	-	7

Two infantile deaths occurred at the City General Hospital, Carlisle, one death at a Carlisle Nursing Home, one at Lancaster Royal Infirmary, and one at a Penrith Nursing Home.

There were, therefore, only two deaths at home.

GENERAL PROVISION OF HEALTH SERVICES IN THE AREA.

The provision of Health Services in the Area is as follows :—

1. The Medical Officer of Health for the Area has a similar appointment with the Penrith Urban District Council, and he also acts as an Assistant County Medical Officer for the Cumberland County Council. His qualifications are M.D., Ch.B.(Edin.), D.P.H.(Edin. & Glasg.)

The Sanitary Surveyor has a full-time appointment. His qualifications include the Diploma of the Royal Sanitary Institute.

A Technical Assistant is also engaged and this official is mainly employed on housing duties.

Two unqualified assistants are engaged in the work of the department.

Five workmen are employed in attending to the water supplies in the area, one of whom is employed permanently as Filter House Attendant at the Headworks Filtration plant at Dowthwaite Head.

2. With regard to Laboratory facilities and Hospital Services, no changes have been made during the period under review.

SANITARY CIRCUMSTANCES OF THE AREA.

No action has been taken by the County Council in pursuance of Section 57 of the Local Government Act, 1929, nor has any action been taken under Section 307 or Section 320 of the Public Health Act, 1936.

I am obliged to Mr. J. A. Sedgwick, Sanitary Surveyor, for the following report :—

Water.

Out of an estimated total population of 12,200 it is calculated that some 9,840 have the benefit of a piped supply of water from the Rural District Council's mains, and the supervision of such an extensive water supply system occupies a very considerable proportion of the working time available. Whilst adequate supplies of water to nearly all consumers are maintained throughout the year, occasional shortages are reported at times from various high

lying parts of the area. Unfortunately reservoir accommodation is very limited, and the demand for water is so great that even a short interruption of main services, caused by the location and repair of defective mains, is sufficient to empty the reservoirs and upset the balance of supplies. Approximately three quarters of the Penrith Rural Area are fed from the Dowthwaite Head source, the remainder of the district being supplied from some 16 local independent sources.

The Regional Scheme is capable of supplying 80 gallons per head per day. The majority of this water is used for agricultural purposes, and the peak demand for water for milk cooling purposes twice daily is responsible in dry weather for intermittency of supply for domestic consumers in some areas.

Consumers suffering in this manner have been recommended to instal small storage tanks in their own premises, and, in those cases where this work has been done, consumers are now very seldom inconvenienced.

Meters are now being installed on supplies to large dairy farms, and steps are taken to prevent undue consumption.

Regular visits and inspections are made to all springs, reservoirs, and samples of water are taken for Chemical and Bacteriological examination with satisfactory results.

Copies of the analysis of the main sources of supply are given below :—

Dowthwaite Head—8th May, 1946.

BACTERIOLOGY.

Agar plate count	0.1 ml. Colonies	1 ml. Colonies	10 ml. Colonies
At 22° C.	6	73	750
At 37° C.	1	14	167

Probable number of coli-aerogenes present in 100 ml.—Absent.

CHEMISTRY.

Appearance in a 2 ft. tube—Slightly coloured, somewhat turbid.
pH. 7.2

	Parts per 100,000					
Free and Saline Ammonia	0.0028
Albuminoid Ammonia	0.0044
Oxygen absorbed from permanganate in 15 mins. at 27° C.						0.0056
Oxygen absorbed from permanganate in 4 hours at 27° C.						0.070
Total Solids	3.3
Suspended Matter	0.0
Hardness—Total	2.3
Permanent	1.8
Temporary	0.5
Chlorine present as Chlorides	0.4
Heavy Metals	0.00

Opinion :—A pure and wholesome water,

Bullfell Springs—8th May, 1946.**BACTERIOLOGY.**

Agar plate count	0.1 ml. Colonies	1 ml. Colonies	10 ml. Colonies
At 22° C.	3	35	340
At 37° C.	Nil	3	21

Probable number of coli-aerogenes present in 100 ml.—None.

CHEMISTRY.

Appearance in a 2 ft. tube—Clear and colourless.

pH. 6.6

	Parts per 100,000					
Free and Saline Ammonia	0.0031
Albuminoid Ammonia	0.0070
Oxygen absorbed from permanganate in 15 mins. at 27° C.						0.000
Oxygen absorbed from permanganate in 4 hours at 27° C.						0.000
Total Solids	2.3
Suspended Matter	0.0
Hardness—Total	0.7
Permanent	0.7
Temporary	0.0
Chlorine present as Chlorides	0.60
Heavy Metals	0.00

Opinion :—A pure and wholesome water.

Wadygill, Lazonby—29th April, 1946.**BACTERIOLOGY.**

Agar plate count	0.1 ml. Colonies	1 ml. Colonies	10 ml. Colonies
At 22° C.	Nil	4	28
At 37° C.	Nil	Nil	7

Probable number of coli-aerogenes present in 100 ml.—Nil.

CHEMISTRY.

Appearance in a 2 ft. tube—Clear and colourless.

pH. 6.9

	Parts per 100,000					
Free and Saline Ammonia	0.0000
Albuminoid Ammonia	0.0018
Oxygen absorbed from permanganate in 15 mins. at 27° C.						0.032
Oxygen absorbed from permanganate in 4 hours at 27° C.						0.048
Total Solids	9.4
Suspended Matter	0.0
Hardness—Total	5.3
Permanent	5.3
Temporary	0.0
Chlorine present as Chlorides	1.2
Heavy Metals	0.0

Opinion :—A pure and wholesome water.

Dowthwaite Head water is the only water subject to filtration and chlorination. It is a very soft water and at times may be plumbo-solvent. Hydrated lime is added both before and after filtration to maintain a satisfactory pH value.

Drainage and Sewerage.

Sewage disposal schemes are urgently needed in many villages in the rural area, and attention must be given at a very early date to the villages of Skelton, Skirwith, High Hesket, Kirkoswald and Blencowe. Preliminary surveys are now being made and schemes are in course of preparation for Skelton and Skirwith.

Closet Accommodation.

The conversion of privies to the water carriage system is proceeding. In most cases of conversion, owing to the non-availability of public sewers, disposal is by means of individual septic tanks, and land irrigation and this method of disposal has proved to be very satisfactory in this scattered rural area.

Public Cleansing.

A regular system of refuse collection is in operation practically over the whole of the area, carried out either by local Contractors or directly by the Council. Suitable tips have been provided capable of dealing with refuse for many years to come.

Swimming Baths and Pools.

There are no public swimming baths in the area, and no privately owned swimming baths are open to the public.

There are school swimming baths at Hunsonby and Culgaith supplied with water from the Rural District Council's mains. These places are regularly inspected and frequent changes of water are made during the short time these baths are in use to ensure satisfactory conditions.

Eradication of Bed Bugs.

No action of any kind in respect of bed bugs was necessary during the year.

Schools.

Following a general inspection of all elementary schools in the area, and informal notices to the Managers concerned, a considerable improvement has been made in Sanitary conditions there. Satisfactory conditions prevail in the majority of the schools,

SANITARY INSPECTION OF THE AREA.

Summary of Inspections Made.

Workshops	20
Dairies and Cowsheds	615
Slaughterhouses	Nil
Petrol Stores	53
Carbide Stores	6
Works in Progress—New Drains, &c... .. .	320
New Buildings	270
General Inspections	363
Inspections <i>re</i> Complaints received	74
Inspections under Housing Acts	Nil
Inspection of Schools	33

Works Carried Out.

Premises cleansed	4
Roofs repaired	16
New Spouting fixed	12
Air Drains fixed	2
Floors relaid and repaired	27
Walls repaired or cemented	43
Scullery Sinks trapped	27
Water Closets constructed	43
Water Closets repaired	37
Privies and E.C.'s constructed or repaired	16
Drains constructed or repaired	43
Sewers and Drains repaired and cleansed	57
New Septic Tanks built.. .. .	16
Water Supplies carried to Houses	34
New Baths fixed.. .. .	26
Cowsheds improved	53
New Cowsheds built	8
New Cooling-houses erected	14
New Houses erected	2
Houses altered or repaired	27
New Windows fixed	26
New Ceilings put up or repaired	43
New Shop Sinks fitted to Houses	17

INSPECTION AND SUPERVISION OF FOOD.

There are a large number of persons in this district registered as Milk Producers. The Register is made up as follows :—

Tuberculin Tested	.....	40
Accredited	.....	16
Wholesale only	.....	561
Wholesale and Retail	.....	103
Retail only	.....	121
Butter	.....	16

During the period under review 430 samples of milk were taken for analysis, and the results were :—

From Schools :—

Samples taken	.....	85
Satisfactory	.....	43
Unsatisfactory	.....	42

From T. T. Producers :—

Samples taken	.....	174
Satisfactory	.....	133
Unsatisfactory	.....	41

From Accredited Producers :—

Samples taken	.....	82
Satisfactory	.....	63
Unsatisfactory	.....	19

From Ungraded Producers :—

Samples taken	.....	62
Satisfactory	.....	27
Unsatisfactory	.....	35

From Ungraded Producers (T.T. Qualifying) :—

Samples taken	.....	27
Satisfactory	.....	23
Unsatisfactory	.....	4

No samples were found to be positive for tubercle bacilli from ungraded producers.

Inspection and Supervision of Food.

The area is a very large one and of a scattered nature, calling for a lot of time and travelling when inspecting the various farms.

The Rural Council now co-operate with the County Council in the collection and analysis of samples of milk. This arrangement is working satisfactorily and has resulted in a more efficient system of sampling.

PREVALENCE OF, AND CONTROL OVER INFECTIOUS AND OTHER DISEASES.

A Summary of the Notifiable Diseases (excepting Tuberculosis) is as follows :—

1945—NOTIFIABLE DISEASES (except Tuberculosis).

Diseases.	AGES.										TOTAL.	Admitted to Isolati'n Hosp	Deaths.
	-1	1-	2-	3-	4-	5-	10-	15-	20-	35-	45-	65-	
Smallpox .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever .. ..	..	..	1	..	1	2	6	3	1	1	..	15	..
Diphtheria .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric and Paratyphoid B. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bacillary Dysentery Sonne ..	..	..	..	..	..	..	1	1	1	..	..	3	..
Ophthalmia Neonatorum	3	..	..	..	..	..	..	..	..	..	..	3	..
Acute Poliomyelitis .. ..	..	1	..	..	..	..	..	..	..	..	..	1	..
Puerperal Pyrexia .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Primary or Influenzal Pneumonia ..	..	1	..	..	..	..	..	..	3	1	..	6	..
Erysipelas .. ..	..	..	..	..	..	..	..	..	..	2	1	5	..
Cerebro-spinal Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	4	16	18	20	13	114	28	11	8	1	..	233	..
Whooping Cough	1	5	3	4	2	16	3	..	..	..	..	34	1
										Totals		14	1

Scarlet Fever.

Fifteen cases were notified in 1945 compared with twenty-six in 1944 and twenty-four in 1943.

Three cases in the Troutbeck district were associated with an outbreak at Keswick in February ; two cases occurred in soldiers at the Calthwaite Convalescent Home in April ; and three were in one household in September.

One case worked at Carlisle and was possibly infected at work in December.

Thirteen patients were removed to the Isolation Hospital and there were no deaths.

Diphtheria.

There were no cases notified during the year 1945, and in this connection the following table shows the numbers notified and deaths from this cause which have occurred during the past 17 years :—

Cases.			Deaths.		
1929	.....	11	.....	2	
1930	.....	2	.....	Nil	
1931	.....	8	.....	Nil	
1932	.....	2	.....	1	
1933	.....	Nil	.....	Nil	
1934	.....	7	.....	2	
1935	.....	5	.....	Nil	
1936	.....	8	.....	Nil	
1937	.....	Nil	.....	Nil	
1938	.....	3	.....	Nil	
1939	.....	2	.....	Nil	
1940	.....	1	.....	Nil	
1941	.....	1	.....	Nil	
1942	.....	3	.....	1	
1943	.....	2	.....	Nil	
1944	.....	4	.....	Nil	
1945	.....	Nil	.....	Nil	

ARTIFICIAL IMMUNISATION AGAINST DIPHTHERIA.

The National Campaign against this disease was continued on similar lines to those adopted in 1944. The number of children immunised during the year 1945 was as follows:—

School.	No. of Children Immunised.	
	School Age.	Pre-School Age.
Great Salkeld	—	2
Skelton	1	12
Kirkoswald	6	17
Dacre	1	1
Ainstable	—	5
Stainton	1	3
Lazonby	2	16
Calthwaite	6	6
Hutton Marr	4	3
Sowerby Row	1	4
Threlkeld	9	5
Culgaith	—	6
Penruddock	1	6
Hunsonby	—	3
Greystoke	1	6
Croglin	1	6
Melmerby	—	1
Langwathby	1	3
Ivegill	—	5
Ousby	—	8
Gamblesby	3	7
	—	—
	38	125
	—	—

The above table does not include children immunised by private doctors, nor does it include “ booster ” injections.

During the year certain Schoolchildren received one “ booster ” or re-inforcing injection, and in this connection it was estimated that 2,034 Schoolchildren had received this treatment prior to 1st January, 1946.

At 31st December, 1945, it was estimated that approximately 58% of children under 5 years of age, and 94% of Schoolchildren, had been immunised.

Sonne Dysentry.

Three cases were notified in 1945 as compared with eleven in 1944. Two of these cases were in one household, and were probably infected from a third case which was not notified until January, 1946.

Acute Primary Pneumonia.

Six cases occurred compared with 16 in 1944, and although there were no deaths among these cases, two deaths were recorded from Pneumonia as a secondary disease (*vide* death register).

Acute Poliomyelitis.

This was an isolated case, a boy aged 13 months, in the Plumpton district which was admitted to the Isolation Hospital on the 4th November, and after 18 days was transferred to the Ethel Hedley Orthopaedic Hospital, Windermere, for necessary treatment.

Measles.

This disease became epidemic in January and lasted until early in June with a total of 233 cases notified during this period, and fortunately there were no deaths. The distribution was widespread throughout the area, and in this connection there was also a large epidemic in the adjacent areas of Penrith Urban and Westmorland Rural (North).

Whooping Cough.

There were 34 cases compared with only 5 in 1944, and this disease was responsible for an infantile death at Ousby in April. The areas affected were mainly Ousby, Blencarn, Skirwith, Culgaith, Skelton and Hutton Roof.

TUBERCULOSIS CASES, 1945.

AGES.	New Cases.				Deaths.			
	Respiratory		Non-Respir.		Respiratory		Non-Respir.	
	M	F	M	F	M	F	M	F
To One year ...	—	—	—	—	—	—	—	—
1 to 5 years ...	—	—	—	1	—	—	—	—
5 to 15 „ ...	—	—	—	—	—	—	—	—
15 to 25 „ ...	1	3	1	—	—	—	—	—
25 to 35 „ ...	—	2	—	—	—	1	—	—
35 to 45 „ ...	—	—	—	—	—	—	—	—
45 to 55 „ ...	1	—	—	—	—	1	—	—
55 to 65 „ ...	—	—	—	—	—	—	—	—
65 and upwards ...	—	—	—	—	—	—	—	—
TOTALS ...	2	5	1	1	—	2	—	—

No action has been necessary in respect of Tuberculosis amongst persons employed in the milk trade or under Section 172 of the Public Health Act, 1936, relating to the compulsory removal to hospital of persons suffering from Tuberculosis.

The total number of cases on the register at 31st December, 1945, is 40, a decrease of 7 as compared with the number at the end of 1944.

9 new cases were added to the register in 1945, and 3 of these were transfers from other areas and 1 was discharged from the W.A.A.F.

There were 2 deaths from Tuberculosis and one of these occurred at Blencathra Sanatorium, a patient whose home situated at Lanark in Scotland could not be transferred.

Number of cases on the register at the end of the year is 40.

Males.		Females.	
Pulmonary.	Non-pulmonary.	Pulmonary.	Non-pulmonary.
11	..... 6	20	..... 3

CANCER MORTALITY.

The deaths from this disease numbered 11 compared with 18 in 1944—4 males and 7 females.

Alimentary System :—	Males.	Females.
Stomach :—	73 yrs.	92 yrs.
	77 yrs.	78 yrs.
	77 yrs.	76 yrs.
Caecum :—	—	68 yrs.
Peritoneal :—	—	69 yrs.
Reproductive System :—		
Ovary :—	—	44 yrs.
Skin :—	—	63 yrs.
Lung :—	69 yrs.	—
	<hr/> 4 <hr/>	<hr/> 7 <hr/>

TOTAL :—11.

The average age at death was $71\frac{1}{2}$ years.

CAUSES OF DEATH AS GIVEN BY THE REGISTRAR-GENERAL.

	Males.	Femlaes.	Total.
Whooping Cough	1	—	1
Respiratory Tubercle	—	2	2
Influenza	1	3	4
Cancer of Stomach and Duodenum	3	3	6
Cancer of all other Sites	1	4	5
Diabetes	—	1	1
Intracranial Vascular Lesions	8	12	20
Heart Disease	20	13	33
Other Diseases of the Circulatory System	7	4	11
Bronchitis	1	—	1
Pneumonia	1	1	2
Other Respiratory Diseases	3	—	3
Ulcer of Stomach or Duodenum	5	—	5
Diarrhoea under 2 years	1	—	1
Other Digestive Diseases.....	1	1	2
Nephritis	3	3	6
Congenital Malformation, Birth Injury, Infantile Diseases	—	4	4
Road Traffic Accidents	2	1	3
Other Violent Causes	1	1	2
All Other Causes	8	4	12
	67	57	124

